

**BIRD POPULATION IN MONOCULTURE PLANTATION OF ACACIA MANGIUM
(4-YEARS OLD), COMPARTMENT L39 IN SABAH FOREST
INDUSTRIES SDN. BHD.**

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ABSTRACT

Despite all the intensive research about bird in the past years, Malaysia is still lacking information about bird population specifically in 4-years old Acacia mangium plantation. This study emphasize on the ecological biodiversity survey of birds with the aim to identify the birds' species diversity and to assess the bird population density. Five transects was established in compartment L39 of 4-years old Acacia mangium plantation in Sabah Forest Industries Sdn. Bhd., Sipitang, Sabah. Survey effort of 504 total points count was accomplished whereas; 5 transect line X 6 points count = 30 points established in each 250 m transect line and observation was done for 21 days from 06:15 hrs to 11:30 hrs every day. Vegetation survey on mangium is done using (10m width X 20m length) X 5 = 0.1 ha method. Species diversity was analysed using Shannon Diversity Index (H') and Simpson Diversity Index ($1 - D$); bird population density was determine using distance sampling and analysed using DISTANCE 6.2; Pearson Correlation (bivariate) was used to analyse the relationship between bird abundance and trees density using SPSS. The study site shows relatively high population diversity ($H' = 3.2063$; $1-D = 0.9374$) and the bird population density is 15.606 (SE = 0.98474; AIC = 870.80; %CV = 6.31). Forty five bird species belonging to 21 families were identified which make up 293 total number of birds been observed. *Rhipidura javanica*, *Dicaeum trigonostigma*, *Arachnothera longirostra* and *Chalcophaps indica* seems to dominate the study site. Pearson Correlations shows a positive relationship between trees density with bird abundance but the relationship is not significant and weak ($r = .093$, $p > .05$). Overall, it was found that 4-years old Acacia mangium plantation (L39) in SFI support bird life however, the bird responses to specific niche or habitats in the plantation areas in different age groove may be undertaken with detail vegetation survey to understand more about the development of bird structural communities and how it can affect the ecosystem.

